HAROLD OAKLEY *del.*

A Proposal for the Treatment of the Surrey Side.

THE FUTURE OF THE SURREY SIDE.

By Paul Waterhouse [*F.*].

Read before the Royal Institute of British Architects, Monday, 16th November, 1914.

Mr. President, Ladies and Gentlemen,—Like you, I am at the present time much more interested in the south side of the Channel than in the south side of the Thames. But it may be right for us to force our attention on to those subjects which now are of secondary importance; and, after all, we may truthfully anticipate that London's needs and London's future will again before long become natural and proper objects of our thought and care.

We have all heard with amusement of the wise young man who remarked on the tendency of rivers to flow through towns, and with superior wisdom have assumed that the converse is the truth. We have inverted the axiom, and state that important towns are generally so placed that they stand on both banks of a river.

As a matter of fact, this is far from being universally true. The town-builder seeks the river site primarily for water supply, secondly for transport purposes, thirdly for defence. In many cases defence is more important to the new town than transport: in many cases also the river while useful for water supply and defence is of no value at all for transport.

I write this in the present tense, but of course I am transferring myself to the days, now far distant, in which the initiation of European cities was a present, not an historical, occupation. Our modern town planners think nothing of defence, nothing of water transport, and very little of rivers as composed of drinking waters.

Using rivers as defence, our forefathers naturally did little in the way of city building on the undefended sides of their chosen rivers; as often as not, the stream of their choice was unbridgeable, sometimes almost unfordable; frequently it was actually picked out as being impassable, and consequently the original city is generally placed on one side only of the watery rampart. Marine towns built at the mouth of a river are, it is true, often found to be clustered on both banks; but how frequently, when

this is the case, do we find that the divided town goes by two different names; thus showing either that one half is of later foundation than the other, or that the establishment of buildings on both banks is due merely to the fact that the inhabitants on both shores considered the riparian property, with its ready approach to the sea, too valuable, as a natural asset, to be wasted. As often as not, these *vis-à-vis* citadels were, I suspect, not friendly halves of the same township, but actually hostile.

Thus it comes about that in nearly every ancient riverside town, even where the buildings are thickly distributed on both banks, there is one side which is known as "over yonder," or "the other side." This is what the Romans called Trastevere—"over Tiber." Even we in London, with all our modern bridges, know what is meant by "transpontine."

Philosophers and poets attempt from time to time to overleap these traditional boundaries. "'What matters it how far we go?' the Walrus then replied, 'There *is* another shore you know upon the other side.'" There is, indeed, but how many times the Walrus, or some other adviser, has to tell us this before we truly, and economically, realise that the statement is anything more than a geographer's or a poet's fancy.

London for many centuries put up with a dangerous ford where Watling Street plunged into the Thames on the Surrey side and emerged at Billingsgate.

I do not know to what extent the original London Bridge of 1176 was covered with the houses which were so interesting a feature of its successor in the later middle ages, but one would expect that bridge to have been a great factor in developing the Surrey side as a corporate part of London. This expectation, however, was by no means verified. For a hundred and fifty years after the bridge was established Southwark was governed by its own Bailiffs. During these years the chief effect of the connection had been as far as Southwark was concerned that it became a city of refuge for malefactors who wished for any easy escape from the city magistrates, a state of affairs which was remedied by a charter under which the Lord Mayor was made Bailiff of Southwark and empowered to govern it by his deputy. It was Edward VI., I believe, who definitely granted the Borough to the city for a money consideration, and subsequently it was formally made a ward under the title of "Bridge Ward Without."

This bit of history merely serves to show that a bridge alone, even with houses on it, will not, for some centuries, serve to break down the barrier of that magic expression "the other side." The Thames, in fact, though bridged, did not flow through London. It flowed past London and between London and Southwark.

In due course other bridges were born. The eighteenth century, besides stripping London Bridge of its chapel gateways and houses (a monstrous deed), built Old Blackfriars Bridge, which it dedicated to William Pitt, and Old Westminster Bridge, which was acclaimed as "one of the noblest structures of its kind in the world."

But these bridges did almost nothing towards the sentimental union of the two townships—indeed, we find that at the opening of the nineteenth century Southwark had a special grievance. Though a ward of the city, it enjoyed no advantages from the incorporation, for the aldermanship of Southwark was adopted as a sinecure for the senior member of the corporation, and the borough got no more good out of its representative than the Chiltern Hundreds do out of theirs. In fact, a scandal arose from the fact that justice was administered in Southwark by the county magistrates of Surrey. This was intolerable to proud Southwark; its inhabitants would apparently have preferred anarchy and outlawry to such rustic justice.

But the scandal and the grievance illustrate my point that charters and bridges were still powerless to turn the outlandish Surrey coast into a bit of integral London. And even in these days it was only a part of Southwark which was nominally London. Its other division—the Clink—was administered by a bailiff under the Bishop of Winchester.

Let us, therefore, to-night approach Southwark and Lambeth with the thought that there is an old score of bad manners against our side which those on the other may not wholly have forgotten.

We go over not merely or mainly to conquer, but to make amends. We must carry across, with our tape measures and levels, not a sword, but a very well-grown olive branch.

But before we approach let me show you a detail slide of Roque's plan of 1743. You see what has happened. In this map Lambeth Marsh, newly reclaimed from swamps and highwaymen, has been town-planned. Before the eighteenth century the map makers, unless they had a taste for sketching vegetation, used the Lambeth corner as the convenient place for the title or the table of references. But here it has been mapped out with roads on a system. The system was excellent then. It is now bad.

The South Side Committee of the London Society has occupied itself by considering how it can advise its brother Londoners on the subject of the Surrey side and its future. Its attitude has been, not to assume that the Surrey side is a proper playground for the sport of visionaries, but simply this—that whereas the Surrey area of denser London, though intimately close to the City, is at present occupied in such a way that its land does not attain the value which its proximity to the centre justifies, it is bound by the laws of what one may call territorial economics to undergo extensive developments. And the important question for you and me as owners of London to decide is, not whether those developments shall take place—that will happen whether we care or don't care—but *how* they shall take place. Let us consider first the problem of the shore itself. Opinions have been offered from a great many directions on the treatment of the right bank of the Thames, and the general gravitation of these opinions favours an embankment road. Some enthusiasts are all for a boulevard—a wide road and trees ; others are indifferent about the trees, but insist on public buildings. In any case I don't think public opinion will be satisfied without a riverside road of some sort.

The London Society cast its eye on the mud bank which lines the Surrey coast (except at high water) all the way from Westminster Bridge to Southwark, and the idea of reclaiming it found at once great favour. Its width in places is so great that a hundred-foot roadway if established along its outer edge would have its inner side still well in advance of the present shore line, or rather wharfline. Could this reclamation be effected, or would the result of placing an embankment along the north edge of the mud be to invite Father Thames to collect a fresh deposit of mud north of that ? Enquiries were directly made in highly authoritative quarters, and the answer was elicited that the reclamation would, as far as Thames himself was concerned (and his traffic), do more good than harm. To answer the questions whether the South Side shore shall remain commercial, and whether, if so, its commercial character shall be identical with its present use, is to assume too great a knowledge of the future. It is certainly unlikely that a tract of land which has been honoured by the establishment thereon of the new Palace of the County Council will always retain its present rather humble range of riverside establishments ; but it would be taking rather a long step to assume that the whole frontage can be dedicated *ab initio* to stately public buildings. There is accordingly a good deal of wisdom in the suggestion that a portion at least of the proposed embankment should be so planned as not to interfere with the actual wharf properties which now occupy the shore. If these in time decline, their sites can be adapted to the building of those monumental structures with which some of my friends already throng the banks—in imagination. If the wharves thrive, and even receive additional consequence from the improved character of the foreshore, the way is left open for rivalling the comely waterways of Amsterdam or the antique commercial dignity of Ghent and Bruges. The device in any case is eminently non-committal. It wins land from water—and where land so surpasses tidal mud in urban value, this mere achievement ought in itself to go a long way, perhaps the whole way, in paying for the enterprise. The embankment road being only a convex version of the route which most passengers would wish to take would not be exactly a short cut to anywhere, but we know that in these days of motor traffic a curved free run is often of more use than an obstructed straight run, and the fact that opinion favours a new Charing Cross bridge which shall deliver *on to* rather than *over* the new embankment road will encourage the use of certain lengths of this road as a traffic outlet of an important

character. Expressed opinion on the subject of the retention of commerce on the Surrey shore is uttered by two kinds of enthusiasts. There is the man who says, Leave the jolly old tumbledown wharves just as they are, leave the mud and the cranes and the bits of broken jetty, leave the shot tower, and even the whiskey tower and the tea tower. The other enthusiasts say, Sweep it all away, tidy it all up, and let the soil blossom with public buildings varying in size and cost from a million to two hundred thousand pounds. If you ask me which of these men ought to have his way, I say the first man. But the fact is that he *can't* have his way. Things happen on the Surrey side whether you wish them to happen or not. The power station of the Post Office is one of the things that has happened. I know nothing of the genesis of this unfortunate building, but it quite spoils by its uninteresting bulk a quarter-mile of the landscape which it encumbers.

I venture to think there is room for a point of view intermediate between the man who says let there be costly public buildings and him who says let there be always mud and shot towers. If there is still any life in the wharf trade let us keep it going and give it dignity.

London used to have a merry quayside; perpetual and easy access to the river was necessary for everybody. The river was the highway for certain journeys, but as soon as bridges and roads superseded the stairs (or riverside landings) and the hazardous alleys which led to them, it became an axiom of London that the river was closed property. River steamers of course have in their time been an exception to this rule, but they are to-day dead or nearly so, and the suicides with their attendant police are now the only people (except professional bargees and tug-men) who have any personal contact with the stream. The trade use of the waterway is utterly shut off. Think of Thames Street, or rather walk along Thames Street. You might be in Haggerston or Hoxton for any evidence you there get of its dependence on Thames traffic. You cannot even smell tarred rope in it, much less can you see a barge.

In almost every town you can think of which does trade on a navigable river there are places where you can walk along a quay, with barges or small shipping on one side of the roadway and warehouses on the other side. The conveyance of goods across the quay is, I suppose, some inconvenience, but it cannot be insuperable or it would hardly have been left to London alone of European cities to discover the peculiar cheerless solution of the problem which is her very own speciality.

The actual recommendation of the South Side report, which is offered as a suggestion rather than a definite proposal, reads as follows: "That from a point adjoining the new L.C.C. Hall to Southwark Bridge there should be a continuous embankment 100 feet wide, so placed that it shall coincide on its river-side more or less with the low-water edge of the mud-bank. At points where the embankment so found is remote from the present wharf frontages, it might be possible by the introduction of the by-stream or lagoon dock principle . . . to leave the present riverside properties in the enjoyment of their present frontages, altered only by an improvement of the water-approach, by the substitution of the lagoon for the mud bank. Barges would, of course, enter these backwaters or lagoons by channels passing under the embankment.

"In other places where the embankment comes close to the present wharf line it is thought that there might possibly be at intervals riverside warehouses, built as wide arches over the roadway, being thus brought up to the riverside for commercial purposes without interfering with the traffic uses of the embankment roadway, &c."

It was in illustration of the by-stream or lagoon dock portion of this scheme that Mr. Harold Oakley prepared the clever drawing which, by the kindness of *The Graphic*, I am able to reproduce at the head of this Paper.

The new Charing Cross Bridge project, at first a visionary idea, seems now to be looked upon by those practically concerned as a reasonable proposition. The project involves the abolition of Charing Cross Station, the formation of a bridge for foot and wheeled traffic in lieu of the present railway which reluctantly harbours a stream of compressed pedestrians, and, of course, the establishment of a new station on the Surrey side.

The idea is certainly excellent; it combines the removal of an eyesore with the introduction of a much needed public benefit. No one knows to what extent the mere annihilation of that awful nightmare of steel would re-make the vanished beauty of the Thames. That alone would be worth fighting for, and the battle once won there is not a man with an eye in his head who wouldn't clamour for the removal of the Blackfriars horror also. The removal of this latter would probably necessitate a railway below the Thames to take its place.

The advocates of the scheme offer variant proposals. Let me allude to what may be called "the battle of the levels." Mr. Lucas is the advocate and to a large extent the originator of a scheme for a high level bridge. He has right and reason on his side. He argued very capably that a high level bridge could start from the Strand at the Strand level, could surmount the present North side embankment and reach the new South Eastern Station at the level of its own railway lines. Excellent commonsense. In fact, the interesting warmth of our friendly controversy was rendered all the warmer by the fact that both sides were in the right. I, as chairman of the South Side Committee, began to think that we should finish with a sort of *Pont du Gard*, doing business at two levels.

I might mention that an interesting variant of Mr. Lucas' scheme showed a roadway starting from the level of St. Martin's Lane and surmounting the Strand as well as both embankments.

But we voted, and the vote fell on the low level.

That this was so was largely due to the production of a low-level suggestion by Mr. Niven and Mr. Raffles Davison. I may remind you that last session we had here an interesting Paper * from the latter gentleman, who produced illustrations of an excellent design which he had prepared in collaboration with Mr. Barclay Niven.

Mr. Niven has now gone further in the matter, and with singular generosity he has allowed me to introduce to this audience his plan for the treatment of the surroundings of the bridge on the South Side. I here exhibit the plan—the simplicity, dignity, and directness of which is its own recommendation, but I refrain from speaking of it at length because I am hoping that Mr. Niven is present and that he will say a few words about it himself. I shall allude to it later in connection with my remarks on the road problem.

I don't care to talk of bridge schemes without reviving once more the bridge scheme of our friend and Past President Mr. Collcutt, which I am sure deserves to be kept in view. I can see nothing whatever against this project. It is brought out every now and again, admired, and put away; condemned, I suppose, as fantastic. But there is nothing fantastic about it whatever, save in the sense that it exhibits the fertile imagination of its author.

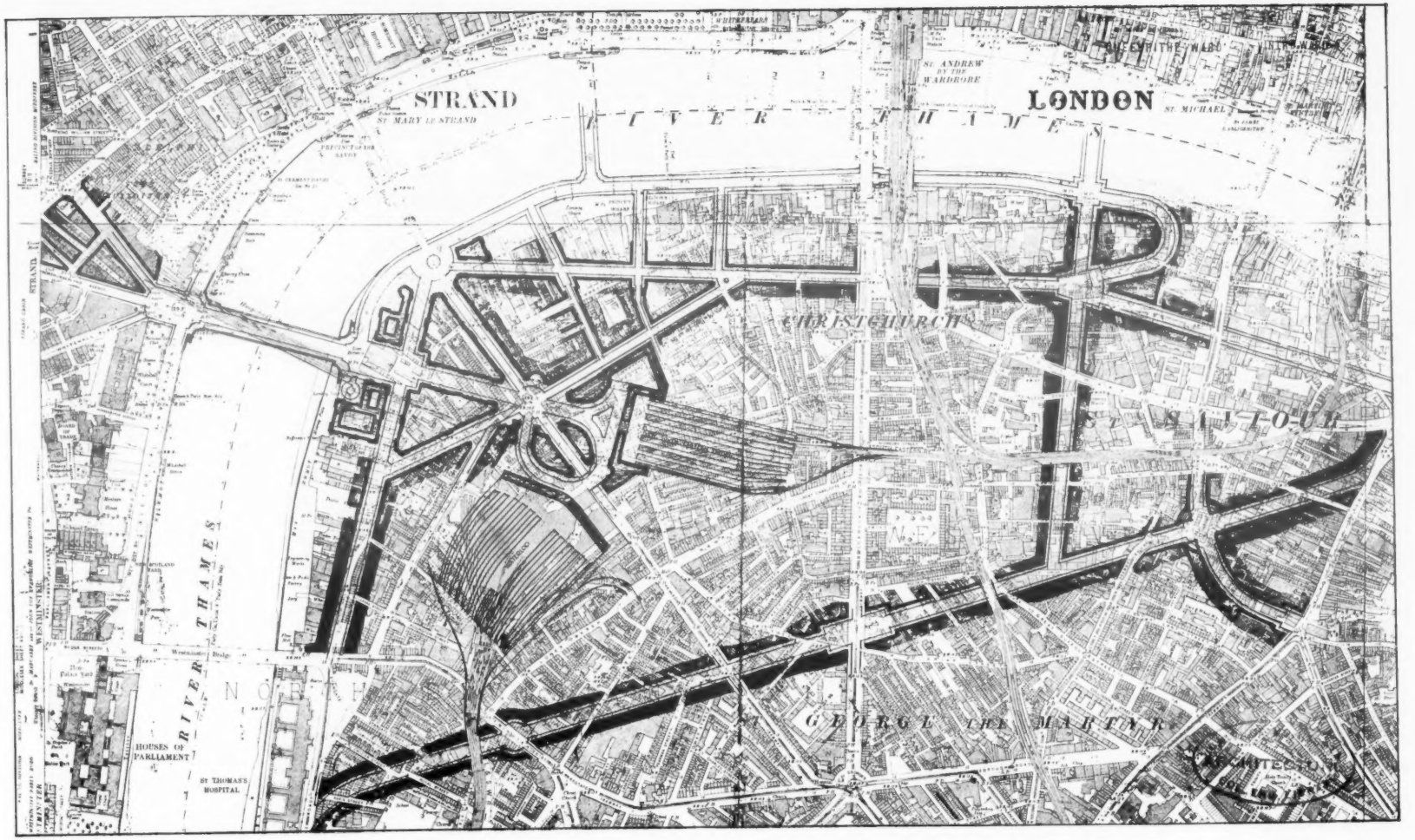
If I do not here allude by name to all the authors of bridge schemes and South Side schemes, it is merely because their names are many, not because their claims are overlooked. Indeed, I owe much to nearly all of them, and have studied their projects largely.

On the subject of Railway Stations and their positions I do not here say much, having already said more than enough on the occasion when I was last before this audience.† I would now merely observe that while accepting the position suggested by the South Side Committee and by Mr. Niven for the proposed new South Eastern Station, I still adhere to the idea that on general grounds, and for reasons of more equable distribution, a better place would be about half-way between London Bridge and Waterloo. I realise, however, that there are very cogent grounds for setting aside the argument in favour of this intermediate site and selecting one as near as practicable to the south end of the new bridge. I must here draw attention to a most interesting paper on this railway subject, which Mr. Leaning communicated to the July number of the *Journal of the London Society*.

The road question is by no means the least important of the Surrey side problems. It is just as well in studying this, not merely to look over the map and suggest that one or two straight wide roads

* "Beautiful London," JOURNAL R.I.B.A., 23rd May 1914.

† See "London Railway Stations," JOURNAL R.I.B.A., 28th February, 1914.



PLAN OF THE SURREY SIDE, SHOWING PROPOSED NEW STREETS, LAGOON DOCK, EMBANKMENT, ETC.

Based upon the Ordnance Survey Map, with the sanction of the Controller H.M. Stationery Office.

The proposed new Charing Cross bridge, and the arrangement of streets in immediate connection therewith, including the position of the suggested new station, are taken from the special plan prepared by Mr. D. Barclay Niven. It will be seen that provision is here made for the Temple bridge, if that should ever be erected, and in connection with the St. Paul's Bridge a new road is shown running southward from the bridge. The new Hall of the L.C.C., though not here indicated, occupies the short site immediately north of Westminster Bridge. (*Note.*—Mr. Niven's plan shows a range of important public buildings at the point where the lagoon dock is here illustrated, and in certain other respects this diagram is a modification and extension of his scheme.—P. W.)

might be added to its tangle of confused routes. The fact is that the roads on the South Side are the unfortunate results of common-sense and system—common-sense which has become inapplicable, and system which has ceased to be valuable. When London had one ford, or one bridge and a few ferry places, it was natural that the roads approaching the town from the south should either concentrate on those points or join one another before reaching those points. Again, when bridges began to span the curving Thames and new roads were wanted on the reclaimed waste of Lambeth Marsh, what could be more natural than to let these roads radiate on to a focal point? As a result the main South of England roads are brought together at the dial centres known as St. George's Circus, the Elephant, and Vauxhall Cross.

So long as the traffic on the roads was moderate there was everything to be said for an arrangement whereby the travellers from the country were collected at points from which they could be conveniently distributed to whatever part of the town was their chosen destination. But it is clear that in a modern town of modern population such concentration is entirely the reverse of what is desirable.

The ideal planning for the arterial roads approaching a town would be that every such road should, instead of joining cause with other incoming routes, divide itself into two tracks at the outskirts of the town, thereby not only giving its passengers the chance of shortening their journey by directing themselves towards the quarter required, but also counteracting that proportionate increase of traffic which grows as the town is approached even in a road that has no important branches brought into it.

An imaginary plan of my own illustrates this principle. A plan of Manchester shows the principle in practice.

Here is a diagram [Fig. I.] of the main roads and bridges as existing. Imagine the Surrey township destroyed up to the circumference of about four miles from Charing Cross [Fig. II.], the distance at which I should like to see a circuit road. How would you reconstruct its roads? If you belonged to the eighteenth century period, liked the idea of concentration, knew that the traffic was comparatively rare, and wanted to collect tolls, you would certainly do something like this [Fig. III.]. It closely, as you see, conforms in principle to the St. George's Circus, Vauxhall Cross, and Elephant distribution, and is fairly perfect except for the fatal present objection that circuses and six-way crossings are unmixed nuisances. Of course it is impracticable to hope for a chance of entirely replanning the roads of this area, but it may be at least worth while to consider the improvements of the future with one eye on the ideal, rather than with both eyes and all energies fixed upon some accentuation of the present objectionable system.

I return to my vision of the essential features of the surroundings. Here is the river, here are the present bridges, and here on the four-mile radius are the existing incoming roads. How should we most reasonably connect these roads with the river crossings in such a way as to provide:

(*a*) Against over-crowding of traffic;

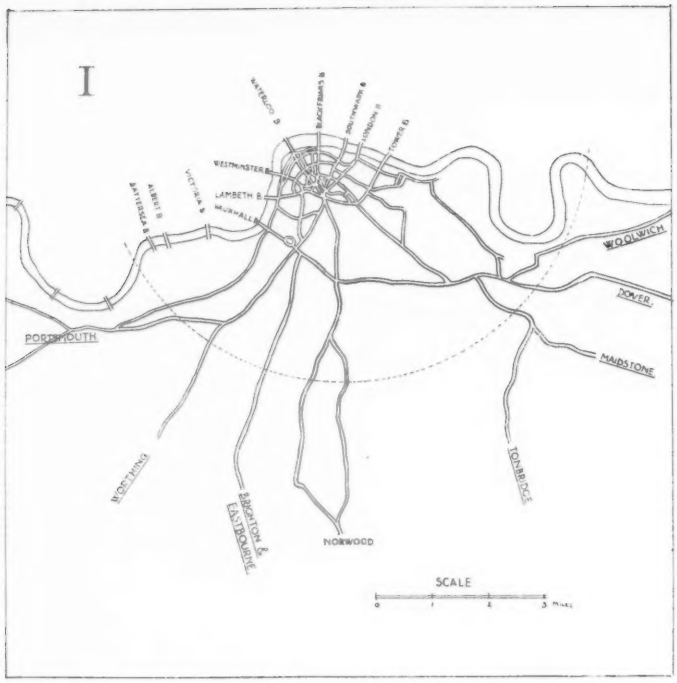
(*b*) For an unwasteful planning of the Surrey land;

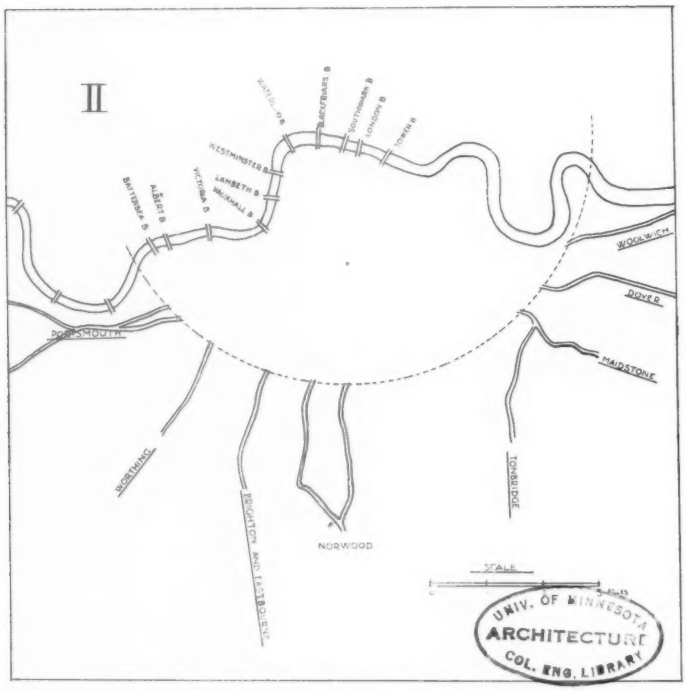
(*c*) For an easy approach to any particular part of the Metropolis.

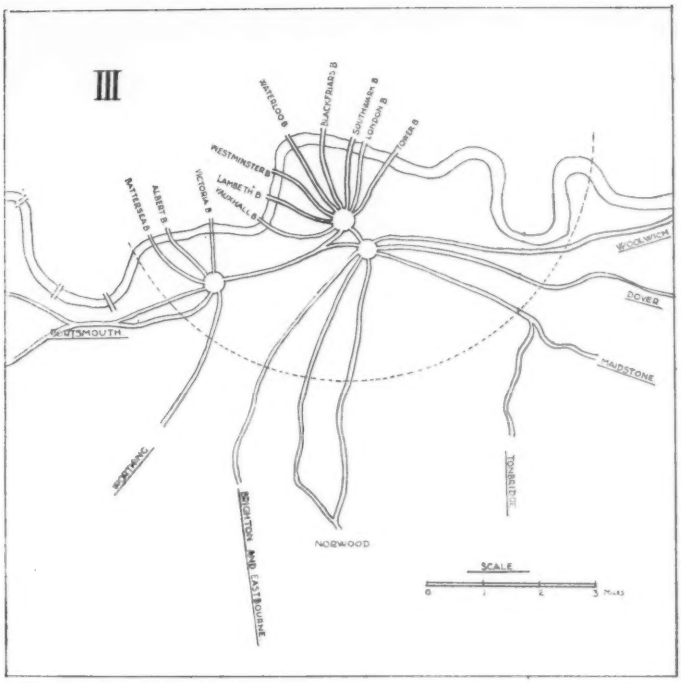
Surely the natural method would be something like this [Fig. IV.]. Of course, I here exhibit only the main streets, leaving intervening spaces unplanned.

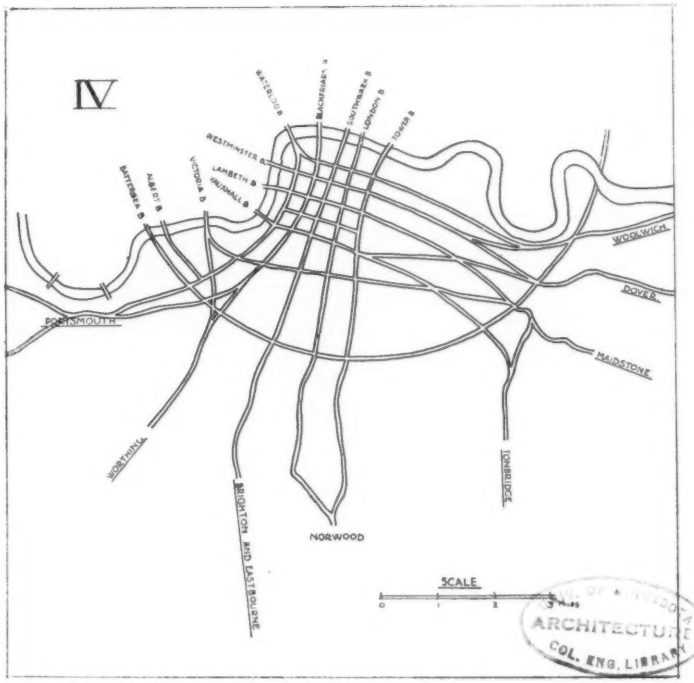
Some of the modern suggestions for new roads imperatively needed embody the construction of fresh thoroughfares intended to discharge into the already congested whirlpools at one or other of the three main circuses. Surely we should hesitate to add embarrassment to these overworked spots without making the attempt to find out whether something cannot here and there be done to get the plan of Southwark and the Borough more nearly into line with the arrangement which appears to be the ideal. For many years I have advocated—and so have others—a comparatively direct road from Westminster Bridge to Southwark Bridge, thus providing a useful drive from the West End to the City. I am told that this cannot be, and that the best I can hope for is an improvement of the connections between Lambeth Bridge and London Bridge. I am not satisfied, for to begin with I do not altogether

of Westminster Bridge. (*Note.*—Mr. Niven's plan shows a range of important public buildings at the point where the lagoon dock is here illustrated, and in certain other respects this diagram is a modification and extension of his scheme.—P. W.)









recognise the new railway work of the L. & S.W. Railway as an insuperable bar to a fine continuation of the initial line of Westminster Bridge Road, and in the second place I realise that far more people want to go from Westminster to the City than from Chelsea and Belgravia.

If I cannot have my road I suggest that instead we should have two good east and west roads. One might be north of the South Eastern line and the other south of it. The high level railway lines in the whole of this region are of course a great barrier to the free planning of improvements. But something can be done even without demanding much, or anything, in the way of new railway bridges.

Taking Mr. Niven's plan as the nucleus of a fresh start, I hope to indicate that much improvement might be made in the direction of clear, straight roads leading definitely from somewhere to somewhere and going about their business quite unfettered by the suggestion that everything must call at the Elephant or at St. George's Circus, or, worst of all, at Vauxhall.

You will see that Mr. Niven has a road that runs due east from the end of Waterloo Bridge, thus serving as a sort of bow-string to the arc of the Embankment curve. This I here adopt as the more northern of my two proposed through roads. Incidentally this road would, besides offering a very direct east and west thoroughfare, serve to pick up from the future Temple Bridge and St. Paul's Bridge whenever these are built.

The exact route of the more southern road which I now propose is not quite so easy to determine. But I have made an attempt at a suggestion. After putting it down on paper I went to look at the route and was pleased to find that the Ecclesiastical Commissioners had anticipated my wishes at one part of the route. When I came as far as Gravel Lane in my journey eastward, I found the ground cleared and, wonder of wonders, the roadway itself actually laid out. But the Commissioners' road is, if I may say so, too narrow, and there is more culture about its curve than seems necessary. The large estate of the L.C.C. near Tabard Street is also undergoing reformation and roads are being laid out. This is the time to assure ourselves that they will be planned with reference to a general scheme of improvement.

You who have been about on the South Side, who have penetrated the Surrey continent, will understand me when I say that there is something amiss with it that mere roads will not cure.

You may, as you cross the river, have doubts about the mud bank, you may have a little uncertainty about whether there is poetry in Bankside or merely oddity, you may, indeed, have fully persuaded yourself that the clean sweep is the only course possible for the reformer of the shore ; but spend an hour with me among the sinuous dreariness of the hinterland, where Victorian enterprise stamped its six-storied gloom upon the prosperity of the then new thoroughfares, and you will come back to the barges, the mud, and the wharves, with such a love for their serene simplicity that you could almost kneel down and kiss the foreshore. Bankside may be doubtful, but there is no doubt about Southwark Street. It is devilish. There is a gloom about its smile-less countenance that casts upon the passer-by something of the shadow of a London Sunday. You come away from it with the impression that the whole street is designed in the style which encouraged the use of stopped chamfers in combination with the Orders. The impression is not far wrong.

The expression the Hop Exchange calls up a vision of overhanging eighteenth-century houses tinged with the spirit of a Kentish market square, but the real Hop Exchange and its surroundings are such that except for the purpose of exchanging hops you would never go near it if it could be avoided. I defy anyone to whom architecture has any spiritual appeal to wander through the region between Waterloo Road and Borough Road without an attack of the deepest pessimism unless he contrives to keep exclusively to the actual slums. The slums, awful as they are, are the only cheerful spots. Barring certain churches and a few settlement buildings, there is in this region of London scarcely a single modern building that does not by sheer force of architectural iniquity radiate actual depression of spirit.

That is one reason to my mind for the formation of two or three new streets running clean through

the district. The streets themselves will not effect the cure, but the mere fact of newer architecture may. Without any doubt the architecture of business premises fifty years ago was in London beastly. The commercial architects of that day laid a heavy and merciless hand on the whole neighbourhood.

It is not merely that every generation thinks ill of that which preceded it, but it is quite certain that in that unhappy period men were given costly opportunities which they were either too careless or too ignorant, or perhaps too diabolically inventive, to use with architectural decency. The tame simplicity of the older houses in Waterloo Bridge Road is bad enough, but it is heaven to the caddish ingenuity of their newer neighbours.

I have done; but I have left many things untouched.

I should like to allude particularly to the work which is being done on the Duchy of Cornwall Estate by Professor Adshead and his partner. You are familiar with it by illustration if not by observation; it is one of the happy signs that the Surrey area is a land of hope.

You have been very patient with me. I can only say that I have not attempted to treat this great subject exhaustively, but merely to throw out some suggestions as to the guidance of future action. I have not wished to advocate expenditure, but merely to plead that the inevitable expenditure should conform to some rational and dignified plan.

DISCUSSION ON MR. WATERHOUSE'S PAPER.

MR. ERNEST NEWTON, A.R.A., in the Chair.

MR. EDWIN T. HALL [*F.*]: I have the greatest pleasure in moving a vote of thanks to Mr. Waterhouse for his most interesting and valuable Paper. He very properly said that our minds are so engrossed in warfare and the science of destruction that they will hardly contemplate anything which has to do with construction. But in these trying times we shall take it as a great compliment to him that so many architects have come here to-night to consider this subject. After all, we are looking forward to the time when the war will be over and we shall again be able to tackle the problems of town-planning which concern our great city. And there is no more fruitful subject for practical consideration than the South Side, because one of the problems that prevent a great scheme being carried out on the North Side is the almost fabulous cost involved. I remember many years ago a gentleman offering premiums amounting to some £1,200 for a scheme for laying out the City of London. The Lord Mayor called a committee together to consider this, and I had the honour to receive an invitation to be present. The first and only committee meeting which was held consisted of the great bankers and other men of financial leading in the City. The meeting broke up in half-an-hour, because it was pointed out that one small street alone would cost twelve millions to reconstruct, and the scheme as a whole would cost something like twice the amount of the National Debt. So nothing more was done. But we have better hopes with regard to the South Side, because, relatively, Southwark is an inexpensive region from the point of view of land value. It is also so intimately associated now with the North Side that something must be done to improve the traffic facilities which bring the great Southern roads into the City. The Committee of the London Society, of which Mr. Waterhouse is the Chairman, has given a great deal of attention to this subject. You will have seen by the slides how carefully the matter has been gone into, and I think you will say that, whether or not these projects can be carried out to-day—or to-morrow—they are admirable schemes to hold before you as something to be carried out during the next century or so—we hope earlier. But, at the same time, unless you do begin by laying down a scheme which shall at all events act as a basis, you will never get a remodelling of any considerable district of London. With that fascination which all Mr. Waterhouse's Papers possess, he has laid this before us. He has also told us something of the very interesting history of Southwark. I should like to draw attention to a little piece of architecture which may not be well known, but which redeems the district from the just censure which Mr. Waterhouse expressed. I refer to the beautiful set of almshouses in Holland St., Blackfriars, one of the most beautiful sets of such buildings which remain in London. Now of the schemes which Mr. Waterhouse has laid before you, my earnest hope is that the Lagoon scheme will be the one which will be carried out. It has this great recommendation, that it reclaims land which is now waste, and therefore you would not be buying land in order to get a more

beautiful embankment. You are not destroying the trade warehouse value which exists there, but are putting it into a backwater, so that the traffic of the Thames will not be impeded by the barges and lighters, because they will be able to pass out of the way of the general traffic into these lagoons, discharge their cargoes and take in others, and so continue the business of the river. If, in course of time, those businesses are dispersed—because it is a most remarkable thing how trades do change—and warehouses become obsolete there, then though you had the Lagoon scheme you would have, in addition to your beautiful road, a magnificent frontage, on which, if the times demanded it, you could get fine public buildings at the back of the lagoons, and these would then be ornamental, instead of commercial waters. That is one great charm about the scheme. We should be delighted to see Charing Cross railway bridge and Cannon Street railway bridge removed from the face of the earth; they are great eyesores which spoil the otherwise beautiful vista as you approach London from the South. The battle of the High-level *versus* the Low-level schemes at Charing Cross was waged in the London Society, and the net result was that the Low-level bridge was thought to be the better of the two. But the merits of the other scheme were carefully considered and were recognised. Still, the beauty of the Low-level scheme, starting from the Embankment, from the architectural point of view would, I think, appeal to all of us. That grand "Place" which would be made at the foot of Northumberland Avenue, with the roads coming in to it at equal angles, and the Embankment joining it, would make a central feature there which would be very delightful. And by the transference of the station to the South Side, you would get a very valuable building site where Charing Cross station now stands, which would probably pay for the whole of the new bridge, if not for the station. The transference of the South Eastern station to the South Side would also relieve the traffic of London by Charing Cross considerably, because, though vehicles from the South would cross the bridge, they would have six different outlets, any one of which could be taken to disperse the traffic. The juxtaposition also of those two great stations would, from the military point of view, be very useful in the transference of troops from Southampton to Dover, and from the North generally to the South and South-West. Then, too, the great point of circuses *versus* what I may speak of as the "gridiron" principle, is well worthy of consideration and study. Many of us here will remember the time when the circuses at Holborn Viaduct, at the foot of Ludgate Hill, and other places were constructed, when it was the general opinion that circuses were the chief things to be aimed at in order to meet the traffic needs of London. I think Mr. Waterhouse is right, however, that they are impossible as foci where you have such a vast traffic as has developed in London. The study of the "gridiron" scheme—I do not use the term at all disrespectfully, but because it calls the drawing to mind—will show that it does in a most marvellous way divert traffic, and you can get to anywhere by means of it; your crossings are rendered easier, because the traffic is spread over ten roads instead of over one only; and, furthermore, it seems naturally to lead from the main arteries to any bridge by which you may wish to go. Great East-to-West roads are undoubtedly wanted on the South Side, and to get from Westminster to the City by means of almost any of the schemes which have been submitted, would immensely facilitate traffic, and, in addition, would develop the district and lend it to a more usefnl occupation than it has at the present moment.

COLONEL R. C. HELLARD, C.B., Head of the London Traffic Branch of the Board of Trade: I have much pleasure in seconding the vote of thanks. It gives me the opportunity of associating myself with many of the schemes which are now before you, and in which I, personally, take a great deal of interest. The present moment, when things at home are somewhat slack, is the time, to my mind, to bring forward for discussion such schemes as these, so that when there is an opportunity of carrying them out we shall have made up our minds as to what is best. Among the various schemes there are very few which present what may be termed engineering difficulties: the difficulties are almost all financial. With regard to the proposal Mr. Waterhouse made concerning the east and west routes south of London, there is, to my mind, a danger in that you throw traffic on to the two bridges—London Bridge and Tower Bridge—which are the two least capable of taking more than they now accommodate. There is, of course, the hope that you would thereby relieve the east and west routes on the north side of the river, and a line of roads running from Westminster Bridge to Tower Bridge would shorten the journey to the far east of London very much. But you would do it at the expense of traffic on those two bridges, and the statistics show that those two carry a greater density of traffic than any of the others. I shall not to-night enter the lists as regards the question of the Low-level or the High-level bridge, but the transference of the South-Eastern Station to the far side of the river would no doubt be beneficial to the general road traffic of London. I am not so convinced as to whether the railway authorities and others may consider it would be for their benefit; but where Charing Cross Station is at the present moment there is no possible room for expansion, whereas if it were removed as suggested, they would get an area there that would allow for any amount of expansion. The scheme Mr. Waterhouse has shown on the screen will provide us with food for thought for a good many years to come, and give bankers and others opportunities for many years after that.

CAPTAIN SWINTON (speaking while demonstrating on the wall plan) said: There is only one point that I want to raise, because I do not know whether the London Society has had it in front of them. I have

been associated with this South Side of the river business now for about four years, though I have not done much at it for the last eighteen months, as my time has been too much occupied with other things. I hoped, before this war came along, that it might be resurrected. I am doubtful about it now, with a Budget of 225 millions, for the money is not likely to be forthcoming. I want to raise this point, which was brought to my notice three years ago by the railway company. When it is a question of removing Charing Cross station from north to south, you must remember Hungerford bridge, which at the present moment exists. I was told that under no circumstances could the station be transplanted until a new road bridge was built. Now you, on this plan, show your new road bridge running through your railway bridge. If you get a railway company who say they will not move until they are given access by road, you must see that the road bridge does not interfere with the railway bridge. I do not know whether the London Committee have had this difficulty in front of them. [Mr. WATERHOUSE: No.] I pointed it out to Mr. Lucas, who is now at the war. It is a serious difficulty, and it was raised at once when we began having discussions with the railway company. I went through this whole South Side question, from the financial point of view, three years ago, and it is not so easy as it looks on paper. With regard to the Embankment Road, I do not know what Colonel Hellard would think of that; I doubt that it will be very useful for traffic. With regard to a walking esplanade on that side, or a park for children to play in, I think there is everything to be said for both, like the Embankment Gardens on the north side. But I find it difficult to know what traffic would use a road! As regards a chord road, I do not know why the line of the New Cut is not easier to follow than this new line drawn on this map, for all this is bad and improvable property, and the New Cut is fairly wide already. Mr. Granville Smith, once Chairman of the Improvements Committee of the London County Council, will tell you how difficult it is to drive a road through property owned by many different people. I think it would not be very expensive to make the New Cut line into a fine road. It would not be a straight road—but does that so much matter? I do not know if a bridge will ever be made opposite the Temple, for it is unfortunate that within the last three years a lot of valuable buildings have been put up there, which would make it difficult to make the approaches. I do not know what value St. Paul's Bridge will be to London. I have always held that it will be a great waste of money. It is going to please nobody architecturally, and will be of very little use for traffic. If citizens were anxious to spend money on a bridge, and would put it up at Charing Cross, then this Great Surrey Side Scheme would become possible.

MR. H. HEATHCOTE STATHAM [*F.*]: There is one point in connection with the Surrey Side which has been rather overlooked this evening. We are bound, sooner or later, to have a new Lambeth Bridge, and anyone who looks at the map will see that Lambeth Bridge is on the most direct road between Victoria Station and the London Docks; and one-half of the wide road which is required for that already exists: it only requires linking up. I published a plan to show that in the *Edinburgh Review* a year ago, and I think it is an idea which is certainly worth taking into account. And that Lambeth Bridge, when built, ought to be of such a nature and size that it will take a large traffic. When that is done and the roads are linked up we expect it will be a very important route. I want to say a word about the æsthetic treatment of the South Side. Between 1815 and 1820 an English visitor to St. Helena was told by Napoleon, "You don't know what to do with that great river of yours; you should make a great boulevard along it." I think he meant both sides. He had not been to London; he had only seen the plan of it; but he anticipated the Victoria Embankment by many years. For the other side of the river, Mr. Waterhouse professed a great admiration for the mud banks and the general untidiness of the river-side. That is all very well at the Pool and in the shipping part; but when you come to London Bridge you come to the stately part of the capital; you have a sublime bridge, like Waterloo Bridge, starting from one side, where there are buildings of architectural importance, and ending on the other side in mean streets. If you have a bridge to carry fine architecture across the river, you want fine architecture on both sides; and I think that run from Southwark Bridge to Westminster Bridge might be one of the finest things in the world if we had Napoleon's boulevards and stately buildings on both sides. I have no admiration for mud banks, at all events in a capital city, and I want to see the South Side made something fine. Another point is Mr. Collcutt's bridge, with houses on it. It is an admirable design in itself, but I protest absolutely against bridges with houses on them; when I go across a river, I want to see the river and to have the fresh air. If we do not see the river it takes away part of the picturesqueness of the town; going over a bridge is a change from going along streets; it is a new view, and it is better hygienically, also, if there are no houses on it. So, whatever the architectural merits of such a bridge may be, I do not want a bridge with houses on it.

MR. EDWARD WARREN [*F.*]: I should like to express my extreme admiration of Mr. Waterhouse's Paper. We always come with pleasure to hear a Paper by Mr. Waterhouse because we expect wit and wisdom, and we always get them—so invariably that one feels there is something wrong with the rule, as there are no exceptions. As to his scheme, it is much too late to criticise it in detail, but I think on an evening of this kind, when there is an opportunity of dealing with the ideal, it is excessively refreshing to deal with it on such a large scale, and cut and carve London as Mr. Waterhouse has done. There is a very

invigorating sensation about such an employment. When one makes an ideal suggestion one is often brought up by the financial expert, and it is dashed because of its impossibilities. But Mr. Waterhouse keeps these impossibilities in the background. I have recently seen Paris under its present unique conditions—I was there a few days ago—and Paris, in its present state of tragic tranquillity, gives one the opportunity not only of observing its architecture, but of observing the splendid disposition of that architecture, its great spaces and the handling of those spaces. And, walking by the side of the Seine, my heart sank at the recollection of the way in which we have treated the waterway here, which at high tide is an infinitely finer one. I do not agree with Mr. Waterhouse in any desire to preserve the hugger-mugger and extremely sloppy condition of the south bank. The picturesqueness is undeniable, especially in the twilight—and twilight does sometimes pervade London, even at ten o'clock in the morning—and such effects are valuable to the painter; but in a Capital city, with ideals, a few of which are being realised, I do not think the mere accidental untidiness and unreasonablenesses which are an accretion of the past should be maintained in the face of the greater possibilities of making the Thames, between London Bridge and Battersea Bridge, one of the finest things in the world. With regard to houses along the sides of bridges, I agree with Mr. Statham. I think blocks of houses on a Thames bridge would be, architecturally, a great mistake; and I agree with Mr. Statham that, having emerged from the comparative confinement of the streets, you intensely enjoy the sense of a great open space which a bridge affords, and an unhampered view of a noble river like the Thames. An open bridge is not to be bartered away without real necessity, not even from the necessity of relieving the cost of the bridge. I would express, once more, my admiration of the Paper, which has given us an evening offering boundless opportunities of considering ideals.

Professor S. D. ADSHEAD [*F.*]: I am one of those innumerable people whom the lecturer alluded to as having produced a scheme for dealing with the South Side of London. I rather hoped that something more would have been mentioned about the removal of Cannon Street Bridge and Station. It is as equally important to remove that, as it is to remove Charing Cross Station. I had a scheme the main outlines of which were based on the principle that it is high time that our arrangements for traffic communication became a little more subtle; that is to say, that we separate our trunk traffic from our suburban traffic. The general lines on which I went provided that suburban traffic should come over the Grosvenor Street Bridge to Victoria, and occupy the old Underground, as far as Cannon Street; that the old Underground between here should be sold to the South London System, and with the money a new Tube line be constructed in the right position, down Victoria Street and up Whitehall and the Strand. But my suburban traffic was to be continuous, coming out from London Bridge Station by a new combined railway and a footbridge over Cannon Street, and emerging from Victoria via Grosvenor Bridge. The trunk lines would remain at London Bridge, or come through to Victoria and Waterloo. In this way I should completely free the river of railway bridges, except Blackfriars. The question of a new connection between Westminster and the City is, of course, always of very great interest; and there comes in my reason for wishing to do away with Cannon Street Station. Instead of Cannon Street Station and Railway I would put my new main bridge, not at St. Paul's, but here, and would occupy the space of the railway line for a certain distance round the curve, as the commencement of a City and Westminster traffic connection, and it would be an economical suggestion. With regard to the Embankment which so many advocate, it seems to me that we must have an Embankment; but the conditions on the South Side are not the same as those on the North; and I agree with what Captain Swinton has said, that there is no need for a road there, except that it will not cost very much to make a road, the chief expense being the Embankment. In a great scheme like this it would merely mean, in the main, pushing the buildings back a little. It would not be the same as making a road on the North Side. The conversion of this South London wharf into an area of palaces is a very drastic idea and I do not think it is likely to come off in this way. I do think, however, that one day we may have some huge Government buildings here, but they will not be exactly palaces or hotels. I do not think we shall ever have the lagoon system. I am inclined to think that improvements in our traffic systems will take away all the business that is now conducted on the river to other spots farther down. And I rather disagree with what Mr. Waterhouse says about circuses and road connections. I think it will be a great mistake, and detrimental to the appearance of a huge city, if we are not to have any traffic connections. As he presents the two systems I prefer his "spider-web" plan, with the big circus, to his gridiron plan. It is only a matter of controlling the traffic. I think the safest part of a road to-day is at an angle where a policeman is stationed. Traffic must be slowed up at these points, and go round centres or curves in a controlled way. That is the true system for collecting and dispersing modern traffic. I wish to thank Mr. Waterhouse for his kind reference to my work at Kennington and for his exceedingly interesting Paper.

Mr. D. BARCLAY NIVEN [*F.*]: I have been very much interested in Mr. Waterhouse's delightful Paper. Not only is it delightful, but it has also been very instructive, especially the scientific diagrams in which he has suggested the roads external to his zone in relation to the different bridges crossing the river. It is well to remember that the Thames is the noblest

open space we have, and the bridges over it enable us to have a fine view of the buildings on either side of it. Coming over Hungerford or Waterloo Bridge in the evening, especially catching the first glimpse of the river from a Continental train, with the fine buildings on the North Side, and perhaps the light in the clock tower of the Houses of Parliament, the traveller gets one of the finest sights to be seen anywhere. Now that the County Council building is being erected on the South Side it is logical to suppose that fine buildings will be put near it. In the scheme I have prepared it is suggested that there should be a road bridge in axis with Northumberland Avenue, terminating in a new South-Eastern Station on the South Side. This new South-Eastern Station is put as near as possible to the South-Western, so that traffic from the South-East to the South-West could conveniently get from one to the other. I should even like to see, if that were possible, the South-Western absorb the South-Eastern, or *vice versâ*, so that there would be one combined through traffic station and not a terminus at all. Captain Swinton pointed out a difficulty in doing away with Charing Cross Station and putting it on a new site on the South Side, in that the proposed new bridge clashes with the line of the existing bridge. But, of course, the new station would be built on the South Side before the present station was vacated, and a temporary bridge would be provided until the permanent bridge was ready. I have hoped that the scheme exhibited might give a dignified solution. The bridge, besides being lower, is shorter from side to side than the High-level proposal, and consequently would be cheaper. The traffic to the North would be quickly distributed by the radiating streets, and to the South would in the same way be quickly distributed to the stations and down Waterloo Bridge Road and Stamford Street. The gradients are spoken of as difficult, but the bridge would be practically the same in gradient as Westminster Bridge; the starting points at either end being the same and the rise to the middle the same above ordnance datum. None of the gradients are more than 1 in 50, which is as easy as to any existing bridge over the Thames. The slight alteration to the level of the Victoria Embankment necessary to arrive at the starting level of the bridge on this side has been carefully worked out and is shown in Mr. Raffles Davison's sketch and is hardly perceptible. The proposed Southern Embankment would be almost identical in levels with the Victoria Embankment, and, like it, would pass under Waterloo Bridge. From the new bridge you descend slightly to the Station "Place," which, however, is still 2.50 above the natural level of the ground. Consequently the approaches to the South-Western Railway and to Waterloo Bridge are both easier by that much than at present, and it would be as easy to get to the new South-Eastern Station. The level of the station is supposed to be the level of the present rails, or the same level as Waterloo. A short vehicular bridge over Waterloo Bridge Road would enable cabs or passengers to get from one station to the other, and the ascents to both stations would be equally available for either. We know there will be difficulties; that, already, there are improved buildings which must be considered, and that before such a scheme can be carried out other buildings will have arrived. Messrs. W. H. Smith & Son have even now put up a building on a portion of the site where the station is proposed to be placed, so there would have to be modifications before anything could be done. With regard to Waterloo, there is the new façade, one-half of which is now being built parallel to Waterloo Bridge Road. This is set back from the road to leave room for a high-level cab rank, the remainder curves to follow the line of the railway connection to Charing Cross. It is an extraordinary thing that a slight railway curve, subject to changes in future, should determine the outline of a great station. I have great pleasure in supporting the vote of thanks to Mr. Waterhouse.

Mr. BERNARD DICKSEE [*F.*]: After 21 years as District Surveyor in South London I may claim to have some knowledge of the ins-and-outs of the neighbourhood. There is one point that appears to have been lost sight of. Mr. Waterhouse is probably correct about the undesirability of these circuses under present circumstances; but they are here, and we shall not get rid of them, so we must make the best of what we have. All those streets in South London were laid out in the middle of George II.'s reign, under a special Act of Parliament, those converging on St. George's Circus and the other circus. At that time there was no bridge over the Thames lower than London Bridge, so that the scheme stopped short at the end of the Borough Road, where it runs into Borough High Street. It appears to me that you have a very good scheme up to a point; why not carry it further? If you lay a rule on the map, and continue the Borough Road, which is an 80 ft. road, straight to the East, clear of the Leather Market, and widen Tanner Street, Bermondsey, you will make a fine road, over what is practically worn-out property, which will enter the Tower Bridge Road just south of where the South-Eastern Railway crosses it. This would make a line for traffic South of the River from the East over Tower Bridge along the new street and the Borough Road; the traffic could then be dispersed over the various bridges by the roads that radiate from St. George's Circus. I have raised this scheme before, at the Local Government Board enquiry, but it has been objected that the Tower Bridge cannot accommodate any more traffic. Colonel Hellard has given me some figures showing how many vehicles cross the bridge in the course of a day, but by spreading the number over 12 hours only out of the 24, it does not give a great number for every few minutes. Tower Bridge has never been inconveniently crowded at any time when I have been near it. But the scheme need not stop at Tower Bridge Road; it could be continued across that road, possibly by a narrower street, and be connected with the two tunnels that pass under the

Thames. In that way you get a short cut from East to West without going North of the Thames. It would appreciably relieve the traffic in the Strand and Oxford Street. One of the merits of such a scheme is that it would pass over an area of rotten buildings—and I use that term advisedly—one part would be laid out afresh, and the other part would consist of streets that exist at the present time. With regard to the lagoon system, I do not know whether any of the gentlemen here have visited the City of Copenhagen; if they have not, it is well worth a visit on that point alone. I do not know any city where water forms a more important part in the laying out; it is extremely charming. I have great pleasure in supporting the vote of thanks.

THE PRESIDENT: I shall not attempt at this late hour to sum up so many different views, but shall content myself with putting the vote of thanks to Mr. Waterhouse for his most able and interesting Paper. Mr. Waterhouse has the incomparable gift of making everything seem so easy—whether it is the removal of our railway stations or the replanning of the whole or a part of London, it does not matter, everything is quite easy. Difficulties are touched on with a light and delicate humour, and seem to disappear of themselves. It is always difficult to know which to appreciate most—the matter of his Paper, or the way in which he puts his views before us. However, he is always certain of a full house, and I am sure I am speaking for everyone present when I tell him we have been instructed and entertained. I now formally put the vote of thanks, which I am sure will be carried by acclamation.

MR. WATERHOUSE: Mr. President and Gentlemen, I think I must be allowed to say one or two things, however late it may be, by way of thanking the friends who have spoken, and among them Mr. Hall and Colonel Hellard. With regard to the overcrowding of London Bridge, it will be remembered that I specially abstained from running the proposed North Road into Borough Road by way of saving London Bridge extra work; and I am hoping that the relief road which is brought into being by Mr. Niven's brain, by picking up the other bridges, will relieve some of London Bridge's duty. Captain Swinton is one of those gentlemen whom I should have wished to mention, and whom I spoke of as remaining anonymous to-night. I was very well aware of Captain Swinton's work in this matter; I believe much of it is veiled under a dignified anonymity, and I did not know how far I should be at liberty to mention his name in connection with it. I am grateful to him for having come to-night. I have been asked why I did not put a new road along the New Cut. It was along the New Cut I originally suggested going, but I have been so criticised for it that I thought it was time to shift my ground and try something else. I agree with Captain Swinton about St. Paul's Bridge, but, if we must have it, it would be as well to have a way of getting to it from the South Side, and that is why I suggested there should be a road leading to it. Mr. Warren and Mr. Statham both expressed themselves kindly. To both I would suggest that the Ponte Vecchio is not a bad bridge though it has shops on it. The treatment is only proposed for one bridge, and I think that even with Mr. Collcutt's bridge we could get a whiff of fresh air and be able to get occasional peeps of the river. I have been called bold this evening; but Mr. Adshead has been bolder in removing Cannon Street Station. That, I am told, is the one irremovable thing in London.

MR. H. J. LEANING, F.S.I., sends the following contribution to the discussion:—

After a long experience of the Sphinx-like impartiality of Mr. Waterhouse as Chairman of the South Side Committee of the London Society, it has been very refreshing to hear from his own mouth what he actually thinks. His synthetic method brings us to the conclusion that, so far as the roads are concerned, we must either work upon almost identical lines to those now made, or make a wholesale clearance and reconstruct.

If opinions were unanimous as to the avoidance of circuses possibly some consideration might be given to the latter course, but they form so integral a part of the planning of most of the European capitals to-day, that one is tempted to think that under proper control they will continue to enter into new plans, though possibly on a much larger scale than before.

The railway concentration scheme which appeared in the July number of the *Journal of the London Society*, to which Mr. Waterhouse honoured me by directing attention, is so intimately connected with the development of South London, that I feel until that problem is solved other efforts concerning roads, &c., will be in vain.

I think Mr. Waterhouse himself is uneasy about it, as he enunciated in a Paper read last year before the Institute a scheme for bringing the Metropolitan Railway across the River and back to join the existing system; but to my surprise he did not mention this scheme on the present occasion.

Much as I admire Mr. Niven's plan for the new Charing Cross, I cannot escape from the conclusion that such a small railway as the South-Eastern and Chatham cannot possibly require two West-End termini. All the main trunk lines are satisfied with one terminus, and it is only for the reason that these two termini once belonged to different companies that they exist to-day. Our present services have become so much a part of our daily life, that it requires a good deal of courage to alter them; but having persuaded the educated public that alterations are necessary, let us go to the root of the matter and consider the whole question of the railway approaches to London from this side as a whole.

It is important to remember that since these lines were constructed great changes have occurred. The

rival systems with their rival routes to London have amalgamated, and it was thought that there would be immediate changes to abolish the waste of competition. They never came, and we still have double routes from several places. The waste is further aggravated by the changed conditions of road traffic, as motor-'buses and electric trams have largely superseded suburban railways—so much so that it would probably be found that the expenses of up-keep of the stations and many lengths of lines close to London actually exceed the takings of the companies from these lines. If that is so, it clearly ought to be in the interests of the Company as well as of the public for some scheme of concentration to be carried out.

I endeavoured to show in my article that by gathering together all the approaches on this system at one point near Catford, as indicated on the official railway map, and by constructing from that point underground lines both to Victoria and to Cannon Street, that the essentials of the present service would be maintained, that only 8½ miles of new line would be required, that roughly 29 miles of viaduct, &c., could be removed without any sacrifice, and that the proceeds of the sale of the land upon which the latter run ought to go a long way towards defraying the cost of the new line. Not the least of the advantages which would accrue from such a scheme would be the removal of *all* the iron bridges across the Thames, the removal of the iron bridge across Ludgate Hill and the station adjoining, the possibility of extending London Bridge Station by the Brighton Company and a proper treatment of its approach, and also the possibility of a proper treatment of Waterloo Station (now so badly spoilt by the South-Eastern lines). Incidentally also, Southwark Cathedral might hope once more to stand in dignified and worthy surroundings.

No doubt there are objections to the scheme, one of the greatest of which is its magnitude and the necessity of Government support for its realisation. This latter seems to be more remote now than ever, and I fear that not even a partial scheme for improvements of any kind stands any chance of being looked at for many years.

With regard to the question of a roadway along the proposed new Embankment, I should prefer to see the new buildings set back a considerable distance from the water's edge, but would much rather see the space between them and the river laid out as public gardens than as a road. There is a pressing need for them everywhere, especially in South London, which is lamentably deficient in such spaces.

I cannot see how any general scheme for the re-development of Lambeth and Southwark can be carried out until the various owners have agreed between themselves as to the various uses to which certain portions of the land shall be devoted. The residential, commercial, administrative, official, and other areas must all be allotted, and as such allotment may lead to unfair restrictions upon certain owners to the advantage of other owners, I think it may be necessary to establish a Commission to settle the various rights and compensations.

Much controversy raged a little time ago around the question of the type of dwelling which ought to replace the ones that will be removed: I think this problem has been very happily solved by Professor Adshead at Kennington, where he has been able to secure the utmost elasticity in the sizes and accommodation of the various tenements, never allowing them to become too large to control and never permitting any single building to assert itself at the expense of its neighbours.

St. Stephen's House, Victoria Embankment:
17th November 1914.

To the Editor, JOURNAL R.I.B.A.,—

The South Side and the London Society.

DEAR SIR,—After hearing the witty and instructive Paper by Mr. Waterhouse, clearly two fundamental matters predominate as to the South Side, one being financial and the other æsthetic.

1. It seems to me that the present war will metamorphose our army, and that, as our main military depôts are situate on the southern lines, these latter must surely be taken over soon by the Government. Such a move will simplify the present difficulties concerning the abolition of *all* railway stations on the North Side.

2. But, whatever scheme be adopted for a boulevard on the South Side, it will be damned æsthetically (as the North is at present) by those hideous eyesores, the trams. Granted, however, that they are necessary evils, let the London Society inaugurate a competition for decently designed trams, including the lettering of the advertisements.—Faithfully yours,

PHILIP A. ROBSON [*A.*].

REVIEWS.

ARCHITECTS AND BELL-HANGING.

Bell Towers and Bell-hanging: An Appeal to Architects. By Sir A. P. Heywood, Bart., M.A. With contributions by Edwin H. Lewis, M.A., E. Alexander Young [A.], and others. 8*o. Lond.* 1914. 2*s. net.* [*Longmans, Green & Co.*, 39 *Paternoster Row.*]

Bell-ringing, as a science, is so essentially and exclusively English, both in its initiative and development, that any treatise written with the object of setting it upon even a higher pedestal than it already occupies is to be welcomed. This is not less true even if we are bound to admit that such a genuine enthusiast as Sir A. Heywood may be apt to treat his subject from a somewhat exclusive standpoint. He is an undoubted expert in some branches of engineering. If dubbed an amateur, the word must be used in its best and fullest sense. His title to be not only an enthusiastic but an expert change-ringer is indisputable. His presidency of our chief Bell-ringing Society rests upon solid achievement in the fascinating exercise he has made his own and transmitted, so report says, to two equally skilled daughters. It is an undoubted advantage for architects to have before them a comprehensive statement definitely from the expert bell-ringer's standpoint.

If this volume had no other claim, it would deserve notice for Mr. E. H. Lewis's able mathematical paper directed "to expose the fallacy that elasticity in a bell frame relieves the strain upon a tower," which, although occupying only 22 out of the 186 pages of the book, constitutes by far the most important contribution. Demonstrations of this kind are worth sheaves of theory or preconceived individual opinion.

But, having said this much, it must be added that the arguments used are not to be accepted as finally conclusive of the thesis set forth, that steel or iron is the only medium to secure such rigidity as is necessary in bell-frame construction. However sympathetic the reader, he cannot but be struck by some curious solecisms, some contradictions and unsupported assertions which do not bear analysis. The outposts, indeed, meet us on the first page of Sir Arthur's introductory chapter, where an earnest appeal is made "to architects to weigh more carefully the expert views of bell-hangers and ringers upon highly technical points. . . &c." "*Crede experto*," he says, and architects cannot but be in sympathy with the remark. But he there and then encourages our credulity by the frank admission that "the bell-hanger may be, and occasionally is, a dangerous man to be allowed a free hand in a church tower," and that "church authorities, whether from motives of economy or in deference to the wishes of the bell-hanger, not uncommonly allow the latter his own way." And we are further told that "an incompetent bell-hanger in a frail tower almost certainly works mischief."

Although not succinctly set forth by our author, we may thank him for so clearly implying the obvious conclusion, which hardly needs statement in this JOURNAL, that no bell-hanger—or, for the matter of that, no other form of engineer—should be let loose upon a church or other work of architecture without the supervision of an expert architect. In a wider sphere we have just had a noticeable instance of the truth of this at St. Paul's, and it is not less true when provision for bells is under consideration.

Take another case. The whole essay contends for rigidity by the employment of steel. Yet the case is given away at the conclusion of the chief author's contribution by the admission that, to secure rigidity, rivetting ought to supplant bolting. "Bellfounders," we are told, "have hardly yet realised that rigidity cannot be obtained in bolted work unless the holes be reamered and the bolts turned to a driving fit." One of the strongest objections to the metal frame as at present constructed could not be better stated by its keenest opponent. Sir Arthur does not add that the extra cost of rivetting or reamering or turning in any complete form would be likely to render the cost of metal frames generally prohibitive.

We become conscious as we proceed that we are dealing with advocate rather than logician, and while the arguments used will doubtless serve to strengthen the prejudices of the bell-ringing confraternity in favour of metal, for reasons which will appear presently, the genuine enquirer cannot feel convinced or even satisfied.

Or another instance. Mr. E. H. Lewis is reinforced by the late Lord Grimthorpe, "distinguished," so says Sir Arthur, "both as architect and engineer" Mr. Thackeray Turner is, on the other hand, demolished by the quotation of a characteristic and well-remembered *Times* letter from Lord Grimthorpe, wherein he claims for himself finality upon this as upon every subject he touched. "This," he says, "is a mechanical question which I have been dealing with in every way for sixty years, both as a builder and a bell designer, including bell-hanging." Mr. Lewis evidently feels himself in queer company, for in giving us typical samples of bell frames for our instruction he remarks upon Frame 1 that it "was planned by the late Lord Grimthorpe in order that the bells might neutralise each other. The effect is exactly the opposite, and the alternations of force are continuous and large"! But perhaps Mr. Lewis was unaware that we were to be harried by Lord Grimthorpe's blank cartridge in another part of the volume!

The enquiring reader will multiply instances like the above, and at the same time find that the thesis is supported by some *naïveté* and a good deal of overlapping. The first is instanced when Sir Arthur assures us that before Mr. Lewis's now first published investigations it had always been considered (clearly by Lord Grimthorpe and presumably also by himself) that if two bells swing in the same plane and are roped on opposite sides they neutralise one another. Of course they do, if they are "fired"—*i.e.* rung simultaneously. But as bells are generally rung in sequence, the exact opposite is the case. It is curiou

if true, that even Lord Grimthorpe and other experts should have hitherto failed to appreciate such an obvious point.

In the matter of overlapping, three times are we told the pretty story how the once-heard extraordinary beauty of the Lavenham bells was explained by the fact that the roof was off the tower—a story which the present writer is compelled from actual knowledge to shatter as apocryphal. Lavenham tower has never been unroofed in the memory of man. A small area of lead was once lifted to uncover a beam by means of which a bell was lifted for adjustment. The Lavenham bells are remarkable at all times, probably because (1) they are beautiful in themselves ; (2) they are not tuned on Canon Simpson's principle ; (3) they are hung upon a wooden frame in a splendidly capacious and lofty belfry, which fulfils all that Sir A. Heywood very rightly asks that a belfry should do.

To those who have not made a special study of towers—a study not complete without all the considerations surrounding bells and bell-hanging—Chapter III. is specially to be recommended. The author's somewhat exclusive outlook is, however, indicated by the objection he raises to clocks in bell towers, whereby the clock-face is set up as an incubus to the architect. It is true that unsatisfactory clock-faces predominate. But most of them are surely derived from stock. How pleasing the clock-face can be in the hands of a competent designer the example at Colchester, St. Leonard, may be quoted. Nor can one concur as to the effect of deep louvres " shooting the sound down into the churchyard." The present writer has experimented upon this to find it a fallacy, at least with wooden louvres. Sound waves are much more complicated, and, moreover, wooden louvres have a resonance of their own. The statement that louvres 6 to 9 inches in height, *without overlap*, suffice to keep out snow, to say nothing of driving rain, may lead the inexperienced architect who heeds it into serious disappointments.

Now, the whole matter resolves itself into two main propositions : (1) Shall the frame be of metal or timber ? (2) In either case shall the upper member of the frame as well as the under be attached to the tower ?

Our author answers " metal " to the first question and " yes " to the second, and marshals all his forces in support of his faith. All but one, that is, in regard to (1). In these days of Central Councils of Bell Ringers, County Associations, College Youths, Diocesan Guilds, University Guilds, Irish Associations, and other ringing societies, to one or the other or most of which every contributor to the volume belongs, the easy running of a new or rehung peal at the very outset of its career is of first importance, as it is equally to the bell-hanger. It is the latter's custom to arrange that one or other of the societies baptizes the bells for him, and the encomiums are duly posted to the next customer. How many of us have not been treated to testimonials of this kind which come more freely from the less well-known firms of bell-hangers !

Now, a metal frame is at its best when just constructed, with the bolts all tightened up and the adjustments freshly made. The cement which pins the girders into the walls is all new and taut. The shrinkage which inevitably takes place in the first four years of its life has not yet set in. Nor have the ends of the irons begun to rust and thrust out or apart the walls. The Guild comes, and perhaps (to the distraction of the inhabitants) is coaxed by the smooth running of the mechanism to bring to a successful conclusion a peal of 18,028 changes in 12 hours and 19 minutes, and thus beats the record of the longest and finest performance in the annals of change-ringing (see p.17).

But what if the frame had been of the now despised and discarded oak, more and more difficult (alas !) to procure well seasoned ? The partially seasoned wood would have been at its worst when new, for it takes a year or more to settle into place. The bells would have gone heavily and the inhabitants would have been spared ! But where was the bell-hanger's testimonial ?

Add to the above the ease of getting the iron and steel and the difficulty of securing the oak, and it is not hard to appreciate the bell-hanger's ready acceptance of the Ringing Guilds' obvious preference ; and a good reason follows why so many splendid timber frames, as, for instance, the magnificent one at Wimborne Minster, have been condemned and turned into trinkets or firewood.

Against such wonted and unwarranted destruction it is the business and the duty of architects to protest, and to make their protest good by refusal. The superiority of metal over wood is not yet proved. The assertion of it certainly does not warrant wanton destruction. The metal frame is a piece of machinery, as, indeed, Sir Arthur Heywood claims, and it is well known that modern machinery has a singularly short life, even when cared for in a manner the bell frame can never expect to be. The nuts can work loose and, unless kept smeared, become set and immovable ; the best of red lead is ephemeral, and constant painting and expense are called for, which the rural parish can ill afford ; the ends of the girders rust in the often damp walls ; the cement works loose, as cement will. A time comes when the ringers begin to wonder if they have gained by the destruction of the good old frame.

On the other hand, after one or possibly two adjustments of the well-constructed timber frame (adjustments which the conscientious bell-hanger will make free of cost), it settles down to a life of perhaps two hundred years, if we may judge of some of the admirable constructions of our forefathers, although they depended only upon wooden pins and experience instead of graphic statics.

That a lasting metal frame cannot be constructed, especially if expense be no object, is not for a moment advanced. It must, however, have a great deal more solidity and weight than has yet been attempted, and it should be entirely of cast metal rivetted. Meanwhile the record of some of the metal frames erected during the last few years is not always a good one.

The Society for the Protection of Ancient Buildings will be adding to its useful work by setting forth succinctly the failures it has recently been investigating.

Upon the important question of rigidity as set forth by Mr. E. Lewis, one has to ask why through all times bells have been hung upon a so-called cage, supported upon beams. Obviously the most rigid construction consists of girders of sufficient strength to support the two gudgeons of the bell, calculated (for vertical thrust) at at least four times its weight, plus the weight upon the one end of any other girder the main girder may have to carry. Such frames have been constructed (there is said to be one at Shipton-under-Wychwood, Oxon.), and have failed.

A point which Sir Arthur does not adequately emphasise is weight. The relation between the weight of the swinging metal to the massiveness of the tower and the weight of the frame is too frequently not well considered. For weight of frame such a simple single-girder construction would fulfil all claims, as well as those of rigidity. The writer has put this form of construction before well-known bell-hangers of great experience, and they will not even consider it. There seems to be a consensus of opinion that the frame raised over the beams does "take up" the complicated thrusts and strains inherent in a mass of metal swinging in all directions. If this be so, then the attachment of the top member of the frame to the walls must be wrong, despite Mr. Lewis's conclusions. If it be not so, then why complicate the matter by framed construction such as Messrs. Taylor's "H" frame from Pontypridd and "side frame" from Wimborne, the latter stated to be introduced to conciliate architects' prejudices? This is not a top-stayed frame, but with the advance of knowledge we are promised "the top-stayed frame as the feature of future scientific bell-hanging."

In this connection the present writer's experience of an iron "A" frame may be recorded. Such a one without top stays had been inserted in a somewhat weak ancient tower, no architect having been consulted. Its effect was so pernicious that the bell-hanger had added top stays—only to make matters worse—and after three months' use the bells had perforce to be silenced. Then the present writer was called in. The frame was condemned and a properly constructed oak one introduced with excellent results, but unfortunately the "A" frame-maker had already been paid.

It may be added that the oldest firm of bellfounders in the country declare that they never have and never will construct a top-stayed frame, either in metal or timber.

One point must not be overlooked by the architect. The bell beams, of whatever material, should be rigidly connected with the tower, and if possible with its four walls—not only two of them. In several ancient towers the beams are placed anglewise from centre to centre of each face, and under certain circumstances there is a good deal to be said for this construction.

We may leave the subject of bell frames with the suggestion that a scientifically constructed frame of reinforced concrete would have a special interest, which it is hoped soon to realise.

Sir Arthur Heywood's preface introduces us to "a revolution in the methods of tuning"—as well as of hanging bells, "conducing materially to musical effect." So far as this refers to mechanical methods of tuning at the foundry, we are at one with him; but we are introduced later to Canon Simpson's heresies, which are emasculating the truest form of bell music in favour of a weak prettiness. As though it were the function of bells to tinkle tunes, or one would wish Wagner's horns omitted from his orchestra!

On this heading a little-known pamphlet by another Mr. Lewis—Thomas C. Lewis, the able and imaginative organ-builder—may well be studied. It is called "A Protest against the Modern Development of Unmusical Tone," and goes straight to the point. Canon Simpson hollows out the crown of the bell in such a manner as to cause the "tap tone and the hum tone" to be true octaves. "Now," says Mr. T. Lewis, "there is nothing poorer in tone than a large bell having a tap or percussion note of a stated definite pitch, and the lower or hum note accompanying it an exact octave deeper. On the contrary, and in defiance, seemingly, of harmony, a fine bell with the tap tone E should have its hum tone a major seventh below, but flattened to the extent of a quarter of a semitone." The musical ear is always seeking that combination of two blended tones, when the true ancient bell tone has been once appreciated.

The other papers and appendices in Sir A. Heywood's volume are worth reading, but have not the same interest. Mr. Alexander Young [*A.*], the architect contributor, is quite sound and interesting. It is noticeable that he adds no reinforcement to Sir A. Heywood's appeal in favour of metal, but sits upon the fence. His lapse into the statement that steel has the advantage of being readily adapted to the construction of a *light* and strong frame is somewhat curious.

The Central Council of Bell Ringers' Report, from which extracts are given, is, or should be, a well-known document among architects.

Sir A. Heywood's book lacks the precision of scale diagrams such as architects naturally look for, and is less interesting on that account. It is to be regarded as an *ex-parte* statement in favour of a fashion which will hereafter be often regretted, as it has been already in a good many cases, by those who are too easily led away by specious arguments. It is not likely to have on this very account much weight with architects. That timber has defects, difficult to conquer (although conquerable), is true. But steel, as so far used, is not the final substitute. We have still to look afield for something better than the tried and trusted Heart of Oak.

W. D. C.

9 CONDUIT STREET, LONDON, W., 21st *November* 1914.

CHRONICLE.

War Clauses in Building Contracts: Insurance against War Risks.

Following upon a Joint Meeting of representatives of the National Federation of Building Trades Employers, the London Master Builders' Association, and the Institute of Builders, held soon after the outbreak of war, the President of the R.I.B.A. received a request from the President of the Institute of Builders that a deputation from the above-named bodies might be interviewed by representatives of the R.I.B.A. with a view to an agreement being come to upon Special War Clauses for insertion in Building Contracts. Mr. Max. Clarke, Chairman of the Practice Standing Committee, Messrs. Edward Greenop and Percival M. Fraser, with Mr. Matt. Garbutt as Hon. Secretary, were accordingly requested to meet the contractors' deputation. The meeting took place on the 4th September, the builders being represented by Mr. F. G. Rice, President of the Institute of Builders, Messrs. Benjamin J. Greenwood, A. W. Sinclair, F. Higgs, W. F. Wallis, Thomas Costigan, Secretary of the Institute of Builders, and A. G. White, Secretary of the National Federation of Building Trades Employers. One of the matters to which the deputation drew especial attention was the possibility that prices of materials might increase in a way which, when combined with other conditions, might cause heavy loss to contractors. Cases were instanced in which several months were allowed to elapse between the date of delivery of a tender and the date of its acceptance. The Practice Committee have since carefully considered this and other matters relating to building undertakings affected by the war, and have reported to the Council. The result, as regards the main points, is contained in the following letter, which has been addressed to the Institute of Builders and the National Federation of Building Trades Employers :—

18*th November* 1914.

DEAR SIR,—I am desired to inform you that the Council of the Royal Institute of British Architects have now completed their consideration of these two questions. The Practice Standing Committee has carried out an exhaustive investigation into the circumstances and we have had the great advantage of the collaboration of the representatives of the Builders.

After the most careful consideration of all the circumstances the Council have finally passed the following resolution :—

"That the Council of the R.I.B.A. are of opinion that they cannot usefully take any official action with regard to providing in Contracts against war risks or variations in cost of materials caused by or attributed to the war, and that it considers that it is best that each matter as it arises should be dealt with upon its merits by the parties concerned."

In communicating this resolution to you they will be glad if you will kindly express to the Council of your institution their appreciation of the assistance which has been so readily extended to them in the consideration of these important matters.—Faithfully yours,

IAN MACALISTER, *Secretary.*

The R.I.B.A. Record of Honour: Fourth List.

Appended is the Fourth List of Members, Licentiates, and Students R.I.B.A. who are serving with His Majesty's Forces for the duration of the War :—

FELLOWS.

Barrow, Ernest R.: Sub-Lieutenant, R.N.R.
Cave, Walter: Chief Petty Officer, R.N.V.R., Anti-Aircraft.
Kitson, Sidney D.: Lieutenant, Yorks Hussars.
Wheeler, Montague: Captain, 4th Royal Berkshire Regiment (National Reserve).

ASSOCIATES.

Amery, T. F.: R.N.V.R. Anti-Aircraft Corps.
Andrews, P. M.: 9th London Queen Victoria's Rifles.
Barefoot, Leslie: R.N.V.R. Anti-Aircraft Corps.
Chaundler, J. H.: Chief Petty Officer, R.N.V.R. Anti-Aircraft Corps. [Mr. Chaundler's name appeared in error in the Students' List in the last issue.]
Cotton, P. P.: Sub-Lieutenant, R.N.V.R.
Dawson, W. F.: Leeds City Battalion.
Dod, H. A.: 3rd Battalion King's Liverpool Regiment.
Fraser, Gilbert: Lieutenant, 1st City Battalion, King's Liverpool Regiment.
Gold, Hugh: Foreign Service Battalion, West Kent Regiment.
Leroy, A. D.: R.N.V.R. Anti-Aircraft Corps.
Martyn, Lawrence D.: Royal Army Medical Corps.
Maufe, E. Brantwood: Royal Naval Volunteer Reserve.
Meikleham, D. L.
Mootham, Delmé G.: 4th Battalion, Royal Fusiliers.
Nimmo, W. Wilson *: Artists' Rifles.
Oakes, Ryeroft: Queen's Westminster Rifles.
Paxton, James: Chief Petty Officer, R.N.V.R. Anti-Aircraft Corps.
Phillips, L. A.: Public Schools and University Battalion, Royal Fusiliers.
Schofield, J. F.: Motor Cyclist Corps, Royal Engineers.
Sinclair, W. Braxton *: Lieutenant, 7th Battalion City of London Regiment (formerly of the 6th Battalion Essex Regiment).
Warnham-Tickle, A. G.: Machine Gun Section, Hong Kong Volunteers.
Winch, A.: Leeds City Battalion.

Erratum.—Lieutenant Hubert Worthington is attached to the First City Battalion, Manchester Regiment (not the Thirty-first Battalion, as described in the last issue).

* The starred names appeared in an earlier list, but the regiments to which these members are attached are now added.

LICENTIATES.

Adams, F. B.: Wiltshire Regiment.
Beckwith, H. L.: Lieut.-Colonel, 4th Battalion Loyal North Lancashire Regiment.
Biram, Frank S.: Captain, 5th Battalion South Lancashire Regiment (Terr.).
Bricknell, T. M.: R.N.V.R., London Division.
Corblet, C. J.: R.N.V.R., Anti-Aircraft.
Goodacre, J. F. J.: National Reserve, Notts.
Grote, A. L.: Lieutenant, Musketry Instructor.
Henderson, Harold E.: Active Service, British East Africa.
Henman, C. H. R.: Engineer Unit, Royal Naval Division.
Kirby, E. B.: Captain, 3rd West Lancashire Brigade, R.F.A.
Mayell, R. Y.: Royal Engineers.
Morter, S. P.: Major, 4th West Lancashire (Howitzer Brigade), R.F.A.
Newton, Francis: Staff, 2nd Division of Cavalry and Artillery.
Ward, J. W.: Sportsmen's Battalion, Royal Fusiliers.
Windsor, Frank: Royal Engineers.

STUDENTS.

Ashenden, H. Campbell: Lieutenant, 3rd Home Counties Brigade, R.F.A.
Bagshaw, A. S.: "A" Squadron, West Kent Yeomanry.
Beasley, Albert: Royal Horse Artillery.
Brown, W. J.: Royal Engineers.
Clemes, Francis: Hertfordshire Yeomanry, Egypt.
Foster, Leonard: Leeds City Battalion.
Grellier, Cecil: Inns of Court Officers Training Corps
Higgs, H. J.: Royal Engineers, No. 13 Signalling Co.
Holroyd, Frank: R.A.M.C.
James, C. H.: 5th Gloucester Regiment.
Jones, C. F.: R.N.V.R. Anti-Aircraft Corps.
Keyte, J. R.: 1st South Midland Brigade, Mounted Field Ambulance.
Ledger, Godfrey H.: R.N.V.R. Anti-Aircraft Corps.
May, T. W. V.: 5th City of London Rifles.
Newbury, C. J.: 7th Battalion Royal Fusiliers.
Norris, Leslie A.: Empire Battalion, 7th Royal Fusiliers.
Palmer, T. R. L.: Lieutenant, Public School Battalion.
Probert, J. M.: 1st Battalion Monmouthshire Regiment.
Walch, J. B. M.: Artists' Rifles.
Wills, Trenwith L.: Middlesex Hussars.
Woodhouse, C. H.

Erratum.—Mr. J. H. Odom, previously described as of the Sherwood Foresters, is with the Derbyshire Yeomanry ("A" Squadron).

R.I.B.A. STAFF.

Baxter, Sergeant A. F. (Commissionaire): Master Gunner, Royal Garrison Artillery.
Cooper, L. R. (Library): Territorials.
Spragg, C. D. (Secretary's Office): Queen's Westminsters.

Subscriptions of Members on Service.

The Council, acting on the recommendation of the Finance and House Committee, have resolved that subscriptions due in January 1915 be remitted in the case of all Members and Licentiates who are at that time actively engaged in the defence of the country, and that the publications of the Institute be sent to their home addresses during the period of their service.

Architects' War Committee: Relief of Professional Unemployment.

The Professional Employment Committee of the Architects' War Committee communicate the following outlines of a scheme for Civic Surveys which they suggest should be organised forthwith with a view to the relief of professional unemployment:—

In view of the general recognition of the fact that thorough civic surveys are an essential preliminary to the preparation of sound schemes for the future development of our cities, it may be pointed out that the present moment offers exceptional opportunities for enlisting the services of those peculiarly qualified for such an undertaking. It is already evident that during the continuance of the war there will be a considerable diminution of employment among the professional classes, many of whom would possess experience and training suited to the demands of this work. In such conditions the provision of a means of livelihood is by far the best method of avoiding distress, and therefore employment or work having a general and permanent value meets, to an exceptional degree, the necessities of the case. A subscription for the purpose has been started by the Architects' War Committee, but it is allocated to this profession only, and as it does not appear that a scheme so wide in its scope should be dealt with on these exclusive lines, it is hoped that the other professions will be induced to co-operate in the collection and distribution of a fund, which, having regard to the general utility of the work to be done, should also receive support from the nation as a whole.

Local supervision might be exercised by an honorary Committee of leading citizens who would employ, on certain definite lines, a professional staff, recommended to them by the various committees interested, for the purpose of procuring and tabulating such information as is comprehended in the civic survey.

It is suggested that the work should be grouped under the following headings:—

1. ARCHÆOLOGICAL.

Comprising records of all sites and buildings of architectural or historic interest, with positions and particulars indicated on maps.

All existing information collated and deficiencies supplied.

Suggestions for the use and preservation of buildings obsolete for their original purposes.

2. SOCIAL AND RECREATIVE.

The study of existing information.

Position, character and areas of parks and recreation grounds, the extent to which they are used, and the location, density and general status of the inhabitants using them.

Public buildings such as libraries, baths, &c., on the same basis.

Private playing fields, golf links, &c., dealt with on similar lines.

National features of exceptional interest.

Suggestions as to correlation of all these, neighbourhood, centres, &c.

3. EDUCATIONAL.

Study of existing statistics as to educational facilities and the local demands on them, diagrammatic indications of grade, attendances, and the operations of private and religious bodies,

4. HYGIENICS.

Existing statistics are here fairly complete. Study of these in relation to physiography and population density, with results shown graphically.

5. COMMERCE.

The indication of existing (and probable future) centres of employment, their character, the number of employees, the localities they occupy, average wages, &c.

6. TRAFFIC.

Railway, water, tramway and road facilities with the existing traffic. Capacity of each and probable future developments considered in relation to traffic.

7. VALUATION.

Graphic rendering of relative values of all land and buildings.

8. GENERAL.

Collection and classification of maps, illustrations and statistics of other towns, British or foreign, displaying similarities in their growth and circumstances.

The information gathered under these headings would be placed in graphic form on ordnance maps, thus giving facilities for comparison between the various factors, and forming a permanent record of present conditions and future possibilities. The whole would be arranged in a form suitable for publication if required, but the confidential character of some of the information would necessitate that exhibition or publication should be at the discretion of the Municipal Authorities. Subject to this proviso the results would naturally be gathered together to form a civic museum, open to the public, which is bound to exercise an important influence on the future of the city.

Professional Classes War Relief: Training and Emigration.

Among the projects of the Professional Classes War Relief Council, particulars of which were given in the last issue of the JOURNAL, none is of more vital importance than that with which the Training and Emigration Committee are charged. The war must affect very seriously the self-supporting woman of the professional classes. Not only will the existing disparity of the sexes in Great Britain be increased, but for some time to come there will be less demand for luxuries and superfluities, and therefore fewer posts for those who cater for them. At the same time there is in some of the Overseas Dominions not only a scarcity of women but an increasing number of openings for educated women, and it is of the greatest importance, from an Imperial point of view, that the best type of our womanhood should be sent to help build up the younger nations. It is essential for all women in the Dominions to have a knowledge of Housecraft, and there is no doubt that a large number of women and girls in the United Kingdom, whether they desire to go overseas or not, would benefit by a training in Domestic Science.

The Committee hope therefore during the coming winter to secure a practical training for a large number of girls and young women, which will be indispensable to them if they go overseas and useful to them if they remain at home. The groups the Committee will have to deal with will be (1) the adult daughters of professional men; (2) younger girls whose school life is cut short rather prematurely by lack of funds; (3) younger members of the artistic professions, already overcrowded; (4) trained workers whose professions are only temporarily disturbed by the war: maintenance or temporary work is needed for these. The idea is to give training in (*a*) domestic work, (*b*) nursing, (*c*) nursery nurses, (*d*) teaching, (*e*) dressmaking and millinery, (*f*) gardening, poultry and bee-keeping, fruit farming, etc., (*g*) economics, library and secretarial work.

The subject of professional training for young men is also engaging the attention of the Council, who feel that it would be very detrimental to the interests of the country if large numbers of boys who on leaving school would normally have gone to the University or had a good professional training, are forced prematurely to become wage-earners. The Architectural Association has promised to grant some free studentships to suitable candidates nominated by the Relief Council, and other offers of a similar nature are anticipated.

To defray the expenses of training, where reduced fees are offered, a Bursary Fund will be started, and will be used to supplement grants in aid from the benevolent funds of the institutions or societies who may desire to obtain this form of help for members of their professions. Arrangements will be made for training in those professions where openings are known to exist either at home or in the Dominions overseas.

Funds are needed to enable the Relief Council to carry out their great and beneficent work. Subscriptions should be sent to the Treasurer, Professional Classes War Relief Council, 13 and 14 Prince's Gate, S.W.

M. Rodin's Gift to the Nation.

M. Rodin has presented to the British nation the remarkable collection of his sculptures which have recently been on view at the Victoria and Albert Museum. The gift includes twenty masterpieces representing all periods of the great sculptor's genius. Three months ago M. Rodin exhibited these works at the Duke of Westminster's house, and they were about to be returned to Paris when war broke out, and it was impossible to get them back. At the suggestion of Mr. Tweed, the sculptor, arrangements were then made for their storage and exhibition at South Kensington. Coming to London later and visiting the Museum, M. Rodin expressed his pleasure at the admirable way in which the sculptures were displayed, and he eventually made up his mind to offer them to the nation. "The English and the French," he said, "are brothers; your soldiers are fighting side by side with ours. As a little token of my admiration for your heroes, I have decided to present the collection to England." The majority of the works are in bronze, two are in white marble, and one, the artist's conception of Dante, in plaster. One of the studies of the head of the well-known statue of Balzac in Paris is in the collection, together with that remarkable example of M. Rodin's genius, "The Age of Bronze," the figure of a youth typifying the awakening of his intelligence. All the works are placed along with the first official recognition in England of the art of Rodin acquired by the Museum —the figure of John the Baptist sowing the seed of Christianity. Mr. Joseph Pease, M.P., President of the Board of Education, in acknowledging the gift on behalf of the Government, expressed the feeling of

us all when he said that M. Rodin's reason for making this magnificent gift would render it doubly precious in our eyes. His generosity has forged a new bond between the two nations. It will be a further opportunity for our artists to draw inspiration from the inexhaustible wealth of the French genius.

Robert Gordon Technical College, Aberdeen.

The Council have approved the appointment of Mr. H. V. Lanchester as External Examiner at the Robert Gordon Technical College, Aberdeen.

OBITUARY.

Mr. Samuel Wayland Kershaw, M.A., F.S.A., who died on the 9th inst., in his seventy-ninth year, was for eleven years (1868-80) Librarian of the R.I.B.A., and afterwards Curator of Lambeth Palace Library until 1910, when he retired. Mr. Kershaw was the youngest son of the Rev. John Kershaw, and was educated at King's College and Cambridge University. His publications include *Art Treasures of Lambeth Palace Library*, *Surrey Sketches in Olden Time*, *Protestant from France*, besides contributions to the Kent, Surrey, and other archæological societies.

Lieut. Philip W. R. Doll, 8th King's (Liverpool) Regiment, who was killed in action on or about 31st October, near Ypres, having been first reported as missing, was the fourth son of Mr. Charles Fitzroy Doll [*F.*]. Born in 1890, he was educated at Charterhouse and Sandhurst, obtaining his commission in 1909, and becoming lieutenant in 1912. A good all-round sportsman, he was in the Charterhouse cricket eleven, and also played for the Aldershot Command. At Sandhurst he represented the College at football, and later the Aldershot Command. At this year's Army Rifle Association Meeting he won Lord Roberts's prize with his machine-gun squad, and also other events.

THE EXAMINATIONS.

The Statutory Examination for Building Surveying.

An examination of candidates for the office of District Surveyor under the London Building Act, held by the Royal Institute pursuant to section 140 of the London Building Act 1894, took place on the 22nd and 23rd October. Five candidates were examined, and the following two passed and have been granted by the Council certificates of competency to act as district surveyors in London :—

HUNTER : JAMES DOUGLAS, F.S.I. [*Licentiate*], 39, Great Marlborough Street, W.

WARREN : HENRY GEORGE [*A.*], of 16, Queen Anne's Gate, Westminster.

On the recommendation of the Board of Architectural Education the Council have resolved to extend the time of the Examination as follows :—

The Written Examination on the first day.
The Graphic Examination on the second day.
The Oral Examination on the third day.
The next Examination takes place in October 1915.

The Final Examination : Problems in Design.

The designs submitted under Subject XVII. will be exhibited in the R.I.B.A. Galleries from 10 a.m. to 8 p.m. on Monday, Tuesday, and Wednesday, 30th November, and 1st and 2nd December.

COMPETITIONS.

Tuberculosis Hospital, Southend-on-Sea.

Members and Licentiates of the Royal Institute of British Architects must not take part in the above competition because the conditions are not in accordance with the published Regulations of the Royal Institute for Architectural Competitions.

By Order of the Council.

IAN MACALISTER, *Secretary* R.I.B.A.

20th November 1914.

MINUTES. II.

At the Second General Meeting (Ordinary) of the Session 1914–15, held Monday, 16th November 1914, at 8 p.m.—Present : Mr. Ernest Newton, A.R.A., *President*, in the Chair ; 40 Fellows (including 10 members of the Council), 25 Associates (including 3 members of the Council), 8 Licentiates, 1 Hon. Associate, and numerous visitors—the Minutes of the Meeting held 2nd November were taken as read and signed as correct.

Mr. E. Guy Dawber, *Hon. Secretary*, announced the decease of the following :—Stockdale Harrison, of Leicester, elected *Associate* 1882, *Fellow* 1890 ; John Henry Arthur Phillips, *Associate*, elected 1899 ; Thomas Herbert Whittaker, *Associate*, elected 1909 ; Bailey Scott Murphy and John Preece, *Licentiates* ; and Samuel Wayland Kershaw, late Curator of Lambeth Palace Library, and former Librarian of the R.I.B.A. (1868–1880)—whereupon a vote of condolence was passed to the relatives of the deceased gentlemen.

It was also resolved, that the Institute do record its sympathy with its esteemed Fellow, Mr. FitzRoy Doll, in the loss he has suffered by the death of his gallant son Lieutenant Philip W. R. Doll, of the 8th King's (Liverpool) Regiment, who was killed in action at Ypres recently, having been first reported as missing.

The Hon. Secretary read a letter from the Earl of Wemyss expressing his Lordship's deep appreciation of the Resolution of sympathy passed by the Institute at the death of his father, the Earl of Wemyss and March, *Hon. Associate*.

The Secretary announced the results of the October Statutory Examination.

The President announced that under the provisions of By-law 25 the Council had at their Meeting that afternoon passed a Resolution expelling Mr. Horace T. Bonner, *Associate*, from membership of the Royal Institute.

A Paper on THE FUTURE OF THE SURREY SIDE having been read by Mr. Paul Waterhouse [*F.*], a discussion ensued, and on the motion of Mr. Edwin T. Hall [*F.*], seconded by Colonel Hellard, R.E., a vote of thanks was passed to him by acclamation.

The proceedings closed at 10.10 p.m.